

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-10. (canceled)

11. (currently amended) A radiation system [[[1)]] comprising:

- a gantry ~~(100)~~ comprising:
 - a static gantry part ~~(140)~~; and
 - a movable gantry part ~~(130)~~ movably supported by said static gantry part ~~(140)~~;
- a radiation head ~~(120)~~ mechanically supported by said movable gantry part ~~(130)~~ and being movable relative said static gantry part ~~(140)~~ in a dedicated spacing in a radiation-shielding separating member ~~(71)~~ between a first position for directing a radiation beam ~~(110)~~ into a first treatment room ~~(61)~~ and a second position for directing said radiation beam ~~(110)~~ into a second treatment room ~~(62)~~, said separating member ~~(71)~~ separating at least said first treatment room ~~(61)~~ and said second treatment room ~~(62)~~; and
- a movable radiation shielding ~~(150)~~ being a part of said movable gantry part ~~(130)~~ and preventing radiation from reaching said second treatment room ~~(62)~~ when said radiation head ~~(120)~~ is

in said first position and preventing radiation from reaching said first treatment room ~~(61)~~ when said radiation head ~~(120)~~ is in said second position.

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12. (currently amended) The radiation system according to claim 11, wherein said static gantry part ~~(140)~~ is adapted for arrangement in a radiation-shielding separating member ~~(71)~~.

13. (currently amended) The radiation system according to claim 11, wherein said static gantry part ~~(140)~~ is adapted for partly being arranged in said ~~radiationshielding~~ radiation-shielding separating member ~~(71)~~ separating at least said first treatment room ~~(61)~~ and said second treatment room ~~(62)~~.

14. (currently amended) The radiation system according to claim 11, wherein said static gantry part ~~(140)~~ is adapted for arrangement in said ~~radiationshielding~~ radiation-shielding separating member ~~(71)~~ separating at least said first treatment room ~~(61)~~ and said second treatment room ~~(62)~~.

15. (currently amended) The radiation system according to claim 11, wherein said separating member ~~(71)~~ is selected from at least one of:

- a radiation-shielding partition between said first ~~(61)~~ and second ~~(62)~~ treatment room;

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- a radiation-shielding ceiling-floor pair between said first ~~(61)~~ and second ~~(62)~~ treatment room, said first ~~(61)~~ and second ~~(62)~~ treatment room being positioned at different floors.

16. (currently amended) The radiation system according to claim 11, further comprising at least one radiation simulation head ~~(200-1, 200-2)~~, said simulation head ~~(200-1, 200-2)~~ being able to direct a radiation simulation beam ~~(210-1)~~ into said first treatment room ~~(61)~~ simultaneously as said radiation head ~~(120)~~ directs said radiation beam ~~(110)~~ into said second treatment room ~~(62)~~.

17. (currently amended) The radiation system according to claim 16, wherein said radiation simulation head ~~(200-2)~~ is movable on said gantry ~~(100)~~ between said first ~~(61)~~ and second ~~(62)~~ treatment room.

18. (currently amended) The radiation system according to claim 16, wherein said radiation head ~~(120)~~ is adapted for providing a treatment beam ~~(110)~~ and said radiation simulation head ~~(200)~~ is adapted for providing a treatment simulation beam ~~(210)~~.

19. (currently amended) The radiation system according to claim 11, further comprising:

- a second gantry ~~(100-2)~~ adapted for arrangement in connection with at least said second treatment room ~~(63, 64)~~ and a third treatment room ~~(65, 66)~~ separated by a radiation-shielding separating member ~~(71, 75, 77)~~; and

- a second radiation head ~~(120-1)~~ mechanically supported by said second gantry ~~(100-2)~~, said second radiation head ~~(120-2)~~ being movable relative said second gantry ~~(100-2)~~ between a first position for directing["] a radiation beam ~~(110-2)~~ into said second treatment room ~~(63, 64)~~ and a second position for directing said radiation beam ~~(110-2)~~ into said third treatment room ~~(65, 66)~~.

20. (currently amended) The radiation system according to claim 19, wherein said radiation head ~~(120-1)~~ and said second radiation head ~~(102-2)~~ are configured for directing said radiation beams ~~(110-1, 110-2)~~ into said second treatment room ~~(63, 64)~~ from different incident angles.

21. (currently amended) The radiation system according to claim 19, further comprising a radiation beam splitter for simultaneously providing radiation from a common radiation source to said first gantry ~~(100-1)~~ and to said second gantry ~~(100-2)~~.

22. (currently amended) The radiation system according to claim 12, wherein said static gantry part ~~(140)~~ is adapted for partly being arranged in said ~~radiationshielding~~ radiation-

shielding separating member ~~(71)~~ separating at least said first treatment room ~~(61)~~ and said second treatment room ~~(62)~~.

23. (currently amended) The radiation system according to claim 17, wherein said radiation head ~~(120)~~ is adapted for providing a treatment beam ~~(110)~~ and said radiation simulation head ~~(200)~~ is adapted for providing a treatment simulation beam ~~(210)~~.

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24. (currently amended) The radiation system according to claim 20, further comprising a radiation beam splitter for simultaneously providing radiation from a common radiation source to said first gantry ~~(100-1)~~ and to said second gantry ~~(100-2)~~.

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